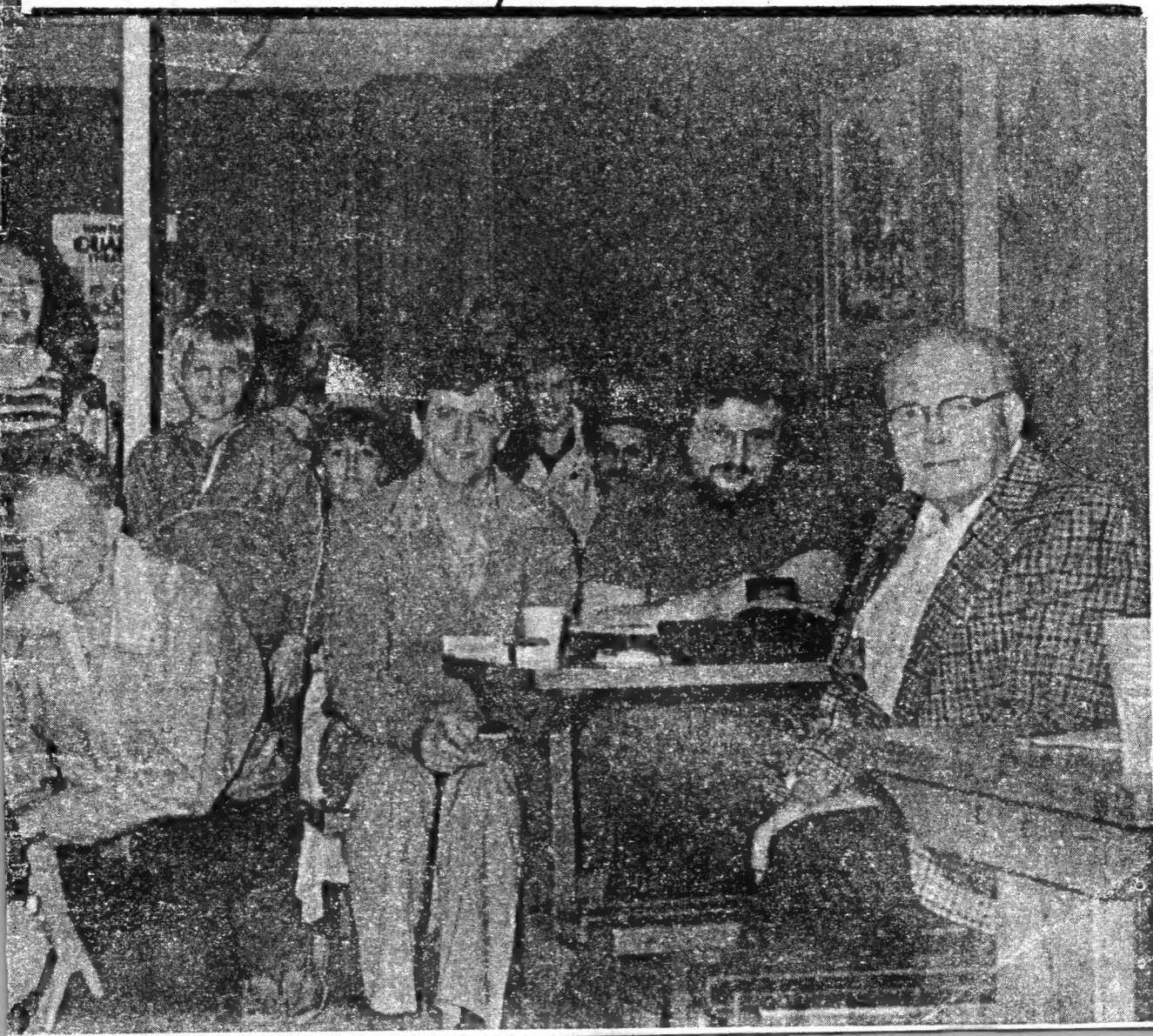
SEPTEMBER OCTOBER 1984

$1.00 price

SINCLAIR USERS GROUP

THE NEWSLETTER OF THE

Victoria Sync Association



THE MESSAGE FROM THE PRES.....

The rains have come.. a fire burns merrily in the hearth.. an eery light flickers from a darkened room.. IT MUST BE COMPUTER TIME. Yes, the elections are over, the kids are back in school, the wife has had a few days of relaxation, and its time to think of some serious computing. Our September meeting will include the election of officers for the coming year. As we want to continue in our normal unorganized fashion, it will be important to install a group of sterling individuals to carry on our traditions. So come prepared to exercise your democratic perogatives. We certainly should be practised up.

The last newsletter was late, but was it great. Our thanks to all those who contributed. The newsletter is the biggest thing the club does, it goes to all corners, and is one of the only methods some people have of keeping up with what is happening to the SINCLAIR computers. Those of you who haven't had a chance to do something for it, we'll be looking to you for support.

Speaking of things SINCLAIR, there is a dearth of copy in the American magazines, but lots in the English ones. I received my promised copies of CREATIVE COMPUTING last week. If there was anything in them about Sinclair, I sure missed it. Disappointed, is putting it mildly. And they were over two months late. The latest copy of YOUR COMPUTER supports the ZX81 and has some neat programs that fit on the 2068. Those of you with CBM64, VIC20, or ATARI gear, there is great stuff in it for you too.

See you at the MEETING....

NO you're not seeing double, there really are two (2) count 'em again - Presidents in our Club! Our Vancouver members have elected their own. This could be the begining of a wonderfull relationship, for all our club members. There are still two groups At Present, we could become 5 or 6 groups or whatever and co-ordinate our mutual activities much like the 3 Bay Area groups do.

Dear Sir:-

I am the President of the Timex/Sinclair User's Group of Vancouver.

A few members from our own group have contacted me to say that they have joined your esteemed group. They were stating that your group has a good section of TS 2068 Users.

In our group we have about 15 or so members with the T/S 2068, that we know of. I have been told that your group has sold quite a few TS 2068 around Vancouver. It would be appreciated if you could forward the names to us so that we could contact them on possible member ship if some are not already.

There was also talk about the ZX Spectrum Rom being used on the TS 2068 by your group. Do you have a Board with the ZX Spectrum Rom with which you can switch from the TS 2068 to the ZX Spectrum. If you do I would appreciate knowing the Price of this unit.

I am awaiting the receipt of the EMULATOR from the Triangle Sinclair User Group in the U.S. On talking to Mr. D. DEWEy of this group he has told me that my EMULATOR has been shipped to me. I am expecting it any day now.

You will also please find enclosed a Postal Money-Order for the sum of $10.00 (Ten Dollars) for which please accept me as a member in your esteemed group.

Sincerely yours,

R. Lussier

R. Lussier (BOB)
President

Timex/Sinclair
User's Group of Vancouver

NOTICE OF NEXT MEETING - Thurs. Oct. 11, 1984 at Bee-Gee's 7:PM.
- AGENDA Course registrations Some Demos t.b.a.
demos planned soon for C-64, Apple CP/M(DBII-WORDSTAR-SUPERCALC)

OUT OF OUR LAST MEETING - Sec's Report, Sept. 13, 1984

Allison's excellent coffee was ready, but she wasn't there yet. While we were signing up new members an taking in last minute dues. What follows is my Swan Song, continued further, on some other page will be the August Report.

Changes The times have forced me and others to survive, to hope for better times and recolour the dream with a bit more drab in the shades of expectations. But yet there is optomism...The White House Players Association may yet stage a new play of global boredom rather than tension...The Trudeau Clone by Tory has proved more compatable to the masses than the new Liberal Blue Chip Model...Likewise Computer "fruit" sales outnumber "Blue" sales, even though the stats are out of sync any way you look at it.

Our own election was a hard battle. Polarized between the Radical Procrastinators and the Reactionary Apathists it was hard to tell who didn't lose. At 8:05 I the Secretary / Treasurer, presided and called the quarum to order (there were a few more than that and paid up too). What power!(Dictator at last). I got on the job of elections with the help of Gerry Christie and called for nominations. Of the top postions Gerry tossed his hat in for Secretary. The office of Secretary/Treasurer split to that of a Secretary and that of a Treasurer. Brian Fowler and Howard Millar tossed in as Directors. The incumbants were acclaimed (Rail-Roaded) to serve as before, with the exception of myself, making contest to be Treasurer.

Tim Humphries and Russel Gaudin closed nominations. Ralph Kerslake and Ron Main moved to use a slate vote, which carried unanimously. Even I remembered to put up my hand after everybody else raised theirs. The eight (8) elected to the New Juante were: His Excellency Presidente' Dave Curry followed by Vice-President Stu Montgomery, Sec. Gerry Christie, Treas. Dee Snoolingin and Dircts.: Brian Fowler, Howard Millar, Bob Clark, Julian Greenwood.

Long Live the Revolution, Viva Sync Viva!

The proposition to put "religious" programs on every computer failed to get on the ballot, as did the "Right to Program Life" die from lack of back-up batteries, only androids and robots were barred from voting.

New Business: Education (of Members)

Gerry took down info on members volenteering to put on cellular Education calandars. If five or more instructors, each put on lessons (2 to 6 hours - over several sessions) and each instructor circulated over groups of 4 or more students in different homes, where each instructor would repeat to each group his same lesson of specialty. Gerry keeps track and schedules these events until the education committee can be resurected. See Gerrys notes on this in the next issue.

!!!August 9--Report: At 8:29 we called to order an un-meeting with the introduction of new members (who were also waiting for Allison's coffee) Tim Humphries and Kevin Ferguson and guest Borna Noureddin and Kayvon Rahbai. We skipped the minutes accepted as not read or published. I gave a spiel for new blood in office Allison announced the barbeque soap flogged the winkie by 8:31 Howard Millar and Gerry Christie moved to adjourn.

Well so much for the transfer of POWER Gerry will now run this show I'm off to count the money!

Dee..

THE EXCITEMENT OF THE ANNIVERSARY WAS TO MUCH FOR ME

I can't seem to remember just who was and who wasn't there.
Who took the Picture? Do you know? How many weren't present and who are those absentees?

You could become the "Chairman of the Trivia Committee" by answering these vital questions. The last procrastinator to respond becomes chosen for the job(rail-roaded into it ,so to speak). With the promotion you get an "Executive Post" with lots of work and No Perks. We don't want to be un-fair so here are some hints:
The guy crouching down front row centre (with the Woody-Woodpecker Smile) is our Official un-official Photographer, whose efforts grace our Newsletter all too infrequently. He supplied the new "corner" photos for your edification. Then theres Doug Couzens, also crouching poised ready to spring, keeping Tom Hatcher alert. Julian is being up-front as well, he's the one who's not only logical but can hook his brow like Mr.Spock does. Is that Allison our sponsor, right in the middle of it as always. And then there's Jake trying to make his machine say "uncle". Why don't you come out of the woodwork Howard you don't always have to be overshadowed by front sitters. Theres our fearless leader checking for stragglers near the back of the room, but it looks like Dave C. missed one. Come on Ken catch up, use George balls technique of hiding in the foreground.

GREETINGS FROM THE NEW SECRETARY.

It is finally arrived. The excellence with which the former executive of the monthly newsletter and the efforts of those who submitted articles,questions,opinions and information has led to a remarkable increase in subscribers,and members.The logistics of the situation on the position of Treasurer/Secretary(editor of the newsletter) neccessitated a split in the responsibilitys. As your new Secretary I will strive to continue the legacy of excellence I inherited September 13,1984. It cannot be done unless the membership as a whole continue to express their ideas through publication. By the I'm Gerry Christie, and my major qualification for the job was an availability of free time, and a passion for 'computing', the fact I like to see my name in print had nothing to do with my campaigning so vigorously for office.

The tradition of printing articles without censorship, nence proof-reading...unless requested, will continue. Please note that submissions arriving later than two weeks before a meeting will appear in the subsequent month's Newsletter,period.

My main 'workhorse-computer' is an Apple Clone called a Miracle, m) purchase of the T/S 1000 came later, so did the 64K Gladstone memory pack. So for those out of towners requesting information I hope to set up a "Foreign Correspondence" column in which our local residents who are more familiar with your particular 'bug' can respond. In relation to that there will be run in conjunction a "Question" column to give those of us locals without solutions a chance to share their expertise.

G O Christie, sec.

IT HAS BEEN A FUN SUMMER,BUT NOW IT IS TIME FOR ALL GOOD MEN TO COME TO THE AID OF THEIR PARTY.

SOME OF YOU MAY HAVE NOTICED THAT I AM NO LONGER MEMBRANING IN THE BACK ROOM OF "ACORN-BOOKS". FOR SEVERAL REASONS, THE FIRST BEING THAT MY HOSTS HAVE GONE OUT OF BUSINESS, AND THE SECONG IS THAT I AM NOW USING TWO DIFFERENT BRANDS OF TACTILE KEYBOARDS MOUNTED ON 2 OF MY EIGHT COMPUTERS. ALSO, OF THE EIGHT, THREE ARE RUNNING IN MY VAN, WITH IMPORTANT PROGRAMS, AND TWO MORE ARE RUNNING IN MY VAN PERFORMING WATCH-DOG DUTIES. (I COULD NOT ASK FOR A MORE SOPHISTICATED SECURITY SYSTEM).

PLEASE DO NOT ASK TO SEE IT WORK, BECAUSE I WILL NOT DIVULGE.

ANYWAY, NOW THAT YOU KNOW WHAT,S HAPPENING WITH ME, HERE,S WHAT IS HAPPENING FOR YOU.

THERE ARE NOW ALMOST 200 PROGRAMS IN THE LIBRARY, AND MORE COMING. MOST OF THEM ARE LISTED ON "VU-FILE" AND SUPPORTING DOCUMENTATION IS AVAILABLE FOR MOST OFTHE MORE SOPHISTICATED PROGRAMS. I WILL BE TRANSPORTING THE ENTIE LIBRARY IN THE VAN, BUT I CANNOT UNDERWRITE THE COST OF A COPIER. THEREFORE, OTHER ARRANGEMENTS WILL HAVE TO BE WORKED OUT FOR HARD COPYS.

IF YOU ARE A MEMBER, YOU CAN LOOK FOR A YELLOW VAN ON THE PARKING LOT AT ROYAL-OAK SHOPPING CENTRE AT 1:00 P.M., MONDAY TO FRIDAY. I WOULD SUGGEST THAT YOU HAVE WITH YOU; A BATTERY OPERATEDTAPE RECORDER, AND A >>>GOOD-QUALITY<<< CASSETTE. IF YOU WANT METO WASTE MY LUNCH HOUR COPYING A PROGRAM ONTO A "FIFTY-CENT-SPECIAL", THEN FORGET IT. I WOULD SOONER WASTE MY TIME IN A PUB.

I AM MORE THAN WILLING TO ALLOW ACCESS TO THE LIBRARY TO A NY PAID-UP MEMBER, BUT I AM STAR TING TO GET "URINATED-OFF" WITH PEOPLE WHO TAKE ADVANTAGE OF ME. (MEANING; DAVE SKAALRUD SUPPLIES THE TAPE, AND THE PROGRAMS, AN NEVER SEES THE TAPE AGAIN)

BUT, MOST PEOPLE PLAY SQUARE, SO FOR THOSE OF YOU WHO CANNOT GET TO R.O.SHOPPING CENTRE DURING THE 1:00 TIME SLOT, HERE IS MY ADDRESS;

DAVE SKAALRUD, NO.36, 10070 FIFTH ST., SIDNEY, B.C. V8L 2X9 CANADA. PHONE (604) 656-5879

MY HARDWARE; EIGHT ZX81/TS 1000, FIVE 16K RAMPACKS, TWO 64K RAMPACKS, ONE 2040 PRINTER, AND NO DESIRE TO OWN A "QL" OR A "2068", SO IF YOU KNOW ANYONE WHO WISHES TO KEEP UP WITH THE ANTIQUES, PLEASE PASS THE ABOVE INFO TO THEM. WHO KNOWS, 20 YEARS FROM NOW, THERE MAY STILL BE SOME PEOPLE USING THESE "TOYS".

YOURS TRULY,

DAVE SKAALRUD

RAND USR 0

The Table is an example of some of the output of the program Dave Skaalrud put together called "HEXER". It will take Decimal numbers and convert them to Hexadecimal or Hex numbers of 4 hex digits and convert them to Decimal. The print function will print out a range from a decimal root to a line of five 4-digit Hex numbers. On the next page, you will see some examples of single entries !!!TAKE NOTE: If you overflow FFFF+n the Hex output will roll-over to 0000+n a handy feature when calculating addresses.

TABLE

5	0005	0006	0007	0008	0009
10	000A	000B	000C	000D	000E
15	000F	0010	0011	0012	0013
20	0014	0015	0016	0017	0018
25	0019	001A	001B	001C	001D
30	001E	001F	0020	0021	0022
35	0023	0024	0025	0026	0027
40	0028	0029	002A	002B	002C
45	002D	002E	002F	0030	0031
50	0032	0033	0034	0035	0036
55	0037	0038	0039	003A	003B
60	003C	003D	003E	003F	0040
65	0041	0042	0043	0044	0045
70	0046	0047	0048	0049	004A
75	0048	004C	004D	004E	004F
80	0050	0051	0052	0053	0054

CONTINUED ON PAGE ..3

CONTINUED FROM PAGE

Q: DO YOU KNOW WHY SIR CLIVE STOPPED GIVING AWAY A SPEECH PROGRAM WITH EVERY ZX81 SOLD?
A: BECAUSE IT WOULD ONLY SPEEK IN BROKEN ENGLISH AND ONLY IF IT COULD BE LOADED!

HINTS FROM HELOISE.

ON THESE HOT SUMMER NIGHTS I FIND THAT TWO ZX81'S CAN HOLD BOTH MY FRONT DOOR AND MY BACK DOOR OPEN AT THE SAME TIME AND PROVIDE ME WITH A COOL REFRESHING BREEZE.

MRS J.T.. CRANMORE ALT.

DEAR MRS J.T.

THANKS FOR THE WONDERFUL TIP, MY ZX81 HAS ALSO SERVED AS A WONDERFUL WHEEL WEDGE WHEN CHANGING A FLAT ON MY 71 PINTO.

DISLAIMER NOTICE: THE ABOVE WAS WRITTEN BY: TWO SINCLAIR ENTHUSIASTS AND SHOULD BE TAKEN IN A HUMEROUS VEIN.
THEY WISH TO REMAIN NAMELESS AS THEY ARE AFRAID OF THE POSSIBLE REPERCUSSIONS FROM SINCLAIR FANS AROUND THE WORLD.

WE THE AUTHORS ARE GENUINELY FEARFUL OF WHAT COULD POSSIBLY HAPPEN WHEN THE TYPE OF PERSON WHO GOES WILDLY ECSTATIC JUST BECAUSE THEIR SO CALLED COMPUTER LOADS SUCCESSFULLY, MIGHT BE PROVOKED.

P.S.: MABY YOU'VE GOT DIRT ON YOUR HEAD?

END

SUBMITTED BY DOUG COUZENS

RESTORE

by Doug Couzens

On pages 108 and 109 of the TS2068 User's Manual is a program illustrating the READ and DATA functions. On page 110 a step is to be added which is to illustrate the use of the RESTORE function in such a program. Unforetunately as presented it wont work. I was convinced that the RESTORE function on my computor wouldn't work.

After consulting with Uncle Jake, the light went on. What is required is to direct the execution of the program to RESTORE at the approriate time and then to go back to the READ step.

To do this enter a null string after "OSLO" in Step 120:- " ", Enter a new step, step 25 IF A$=" " THEN GO TO 200. To get back to read the data enter another new step, step 210 GOTO 20.

Another method of accomplishing the same thing without a string array is illustrated using the program in Chapter 16: "User Defined Graphics" as a basis:

```
10 FOR n=0 TO 7
11 STOP
20 READ a: POKE USR "q"+n,a
30 NEXT n
40 RESTORE
50 GO TO 10
60 DATA BIN 01000000,BIN 01000
100,BIN 01001000,BIN 01010000,BI
N 00101010,BIN 01001010,BIN 0000
1111,BIN 00000010
```

Of course in both the cases illustrated you end up in an endless loop (only a pause in the first case when the screen gets full.) I'll leave it up to you to extradite yourself.

UPGRADE? What do you do with the old system and the old software? When you start thinking your old stuff is obsolete someone comes along with a utility that blows that pessimistic opinion. All the files and programs, in theory can, be uploaded from a 1000 to a 2068; where they can be edited to remain usefull. Some programs will take more work than it is worth and to re-enter a translation may be faster...but what about something newer on the 1000 or ZX81 some files did not seem practicle but with a 2068 as a destination the 1000 or even a ZX80 (or a micro-ace) with only 1k can be practacle as a data entry to tape system, using some of the fast/save techniques. Many of the programs entered on the early models were for study but not used extensively because of speed and other considerations. These can be uploaded to be usefull on a system hard to develop software on. This technique is most popular in all areas of computing and software piracy. For example the executive toy known as the blue has had a bulk of its software which runs in 8088 native code uploaded from 8080 code often the translation done on the assembly language source code of the original program. Any program routines that are debugged from an earlier machine can be implemented on a later machine and even on a totally differnt family of native code machine. If one used a Sinclair version of "C" it could be run on mainframe computers without any changes. I hope to encourage our members and readers to use their imagination and maintain the value and respect for their machines that they have and to their programs and data files. Much of this early work is a valueable store of source material that is vital to the development and evoloution of new systems. That little program idea that works on your machine but just doesn't run fast enough or doesn't display as nicely as you like could be the WORDSTAR or DBASEII of the system of tommorrow. Before the Z80 processor took over CP/M an 8080 Word Master was the pre-cursor to WORDSTAR version 2 and the same for WORDSTAR on the P.C.. Keep your library of answers waiting for the problems, because its only tommorrow when they start to show up. As more of start using Modems we may discover the obvious applications expressed here.

Dee.

CONTINUED FROM PAGE...2

```
9999 = 270F

65535 = FFFF

0 = 0000

1 = 0001

16514 = 4082

8192 = 2000

12345 = 3039

10 = 000A

345 = 0159

903 = 0387

   1 SAVE "HEXER" PUT TOGETHER
BY --DAVE SKAALRUD--
   2 CLS
   3 PRINT "1>SINGLE NUMBER",,"2
>PRINTOUT"
   4 PAUSE 4E4
   5 IF INKEY$="1" THEN GOTO 351
0
   6 IF INKEY$="2" THEN GOTO 400
0
   7 GOTO 4
   8 REM AT PROMPT, INPUT ANY
NUMBER FROM 0 TO 65535 AND YOU
WILL GET A FOUR CHARACTER HEX
NUMBER ON THE SCREEN.
 190 LET TS2=0
 200 LET NCOD=28+20*TS2
 210 GOTO 3000
 310 LET Y=INT (X/16)
 320 LET Z=X-Y*16
 330 LET H$=H$+CHR$ (NCOD+Y+7*(Y
>9)*TS2)+CHR$ (NCOD+Z+7*(Z>9)*TS
2)
 340 RETURN
 350 REM HEXER
 360 LET X=INT (J/256)
 370 GOSUB 310
 380 LET X=J-256*X
 390 GOSUB 310
 400 LET H$=H$+" "
 410 RETURN
3510 INPUT J
3520 LET H$=""
3580 GOSUB 350
3581 SCROLL
3582 PRINT J;" = ";
3590 PRINT H$
3600 SCROLL
3610 GOTO 3510
4000 INPUT J
4005 LET F=0
4010 LPRINT TAB 0;J;" ";TAB 7;
4020 FOR L=1 TO 5
4030 GOSUB 350
4040 LPRINT H$;
4045 LET H$=""
4046 LET J=J+1
4050 NEXT L
4055 LET F=F+1
4060 IF F=100 THEN GOTO 5000
4070 GOTO 4010
5000 LPRINT ,,"----------------
---------------",,
5010 GOTO 4005
```

```
8410 LET D(I,1)=J
8420 LET J=J+A
8430 LET D(I,2)=J-1
8440 NEXT I
8450 LET J=J-1
8460 LET N=0
8470 LET AVAL=PEEK 16386+256*PEE
K 16387-PEEK 16412-256*PEEK 1641
3
8480 LET M=INT ((AVAL-N1*(32-L+1
2))/J)
8490 CLS
8500 PRINT "MAX. NUMBER RECORDS
POSSIBLE IS";TAB 0;"APPROX. ";M;
AT 3,0;">ENTER RECORDS EXPECTED:
 ";
8510 INPUT A
8520 LET A=INT A
8530 IF A>0 AND A<=M THEN LET M=
A
8540 IF A>0 AND A>M THEN GOSUB 8
600
8550 IF A>0 AND A>M THEN GOTO 84
90
8560 DIM I$(M,J)
8570 PRINT A;AT 6,(32-LEN X$)/2;
X$;TAB (32-LEN S$)/2;S$;AT 10,10
;"LIST SET UP"
8580 GOSUB 9200
8590 RETURN
8600 PRINT AT 12,0;"NUMBER IS TO
O LARGE FOR MEMORY";TAB 0;"AVAIL
ABLE"
8610 FOR X=1 TO 100
8620 NEXT X
8630 RETURN
8700 CLS
8710 PRINT AT 12,0;"PRINT FIELD
NAMES? [Y] OR [N] "
8720 IF INKEY$="Y" THEN GOTO 875
0
8730 IF INKEY$="N" THEN GOTO 877
0
8740 GOTO 8720
8750 LET F=1
8760 RETURN
8770 LET F=0
8780 RETURN
9000 REM LIST FIELDS
9010 LET V=LEN X$
9020 PRINT TAB (32-V)/2;X$
9030 PRINT TAB (32-V)/2;Z$;
9040 GOSUB 9080
9050 LET V=LEN S$
9060 PRINT TAB (32-V)/2;S$
9070 PRINT TAB (32-V)/2;Z$;
9080 FOR X=1 TO V-1
9090 PRINT Z$;
9100 NEXT X
9110 IF V=LEN X$ THEN RETURN
9120 PRINT AT 5,11;"LIST FIELDS"
;AT 8,0;
9130 FOR I=1 TO N1
9140 PRINT N$(I);
9150 IF I=1 THEN LET Y=D(I,2)
9160 IF I>=2 THEN LET Y=D(I,2)-D
(I-1,2)
9170 IF Y<10 THEN PRINT TAB 16;"
 ";Y;" CHR$ "
9180 IF Y>9 THEN PRINT TAB 16;"
";Y;" CHR$ "
9190 NEXT I
9200 RAND USR 2591
9210 PRINT "                [M]ENU"
9220 IF INKEY$<>"M" THEN GOTO 92
20
9230 RETURN
```

```
9300 RAND USR 2591
9310 PRINT " [C]ONTINUE [P]RINTE
R [M]ENU"
9320 IF INKEY$="C" THEN GOTO 936
0
9330 IF INKEY$="P" THEN COPY
9340 IF INKEY$="M" THEN GOTO 200
9350 GOTO 9320
9360 LET P=0
9370 CLS
9380 RETURN
9600 REM ->MEMORY STATUS<-
9602 LET PROG=PEEK 16396+256*PEE
K 16397-16509
9604 LET VARI=PEEK 16404+256*PEE
K 16405-PEEK 16400-256*PEEK 1640
1
9606 LET DISP=PEEK 16400+256*PEE
K 16401-PEEK 16396-256*PEEK 1639
7
9608 LET AVAL=PEEK 16386+256*PEE
K 16387-PEEK 16412-256*PEEK 1641
3
9610 CLS
9620 PRINT TAB 8;"
■";TAB 8;" MEMORY STATUS ";TAB 8
;"                "
9630 PRINT AT 6,0;"PROGRAM USES
";PROG;" BYTES";AT 9,0;"VARIABLE
S USE ";VARI;" BYTES";AT 12,0;"D
ISPLAY USES ";DISP;" BYTES";AT 1
5,0;"THERE ARE ";AVAL;" BYTES AV
AILABLE"
9640 FOR X=1 TO 400
9650 NEXT X
9660 GOTO 200
9700 REM ->JUSTIFY DECIMAL<-
9710 IF JN=.005 THEN LET JN=.006
9720 IF JN=-.005 THEN LET JN=-.0
06
9730 LET JN=INT (100*JN+.5)/100
9740 LET J$=STR$ JN
9750 IF J$(1)="." THEN LET J$="0
"+J$
9760 FOR J=1 TO LEN J$
9770 IF J$(J)="." THEN GOTO 9800
9780 NEXT J
9790 LET J$=J$+".00"
9800 IF J$(LEN J$-1)="." THEN LE
T J$=J$+"0"
9810 LET JT=LEN J$
9820 RETURN
9900 REM SAVE ROUTINE
9920 PRINT AT 5,5;"
";TAB 5;" SAVE PROGRAM
AND DATA ";TAB 5;"
"
9930 PRINT AT 10,5;"1) POSITION
THE TAPE";AT 12,5;"2) ON RECORDE
R PRESS:";TAB 8;" RECORD AND P
LAY "
9940 PRINT AT 15,5;"3) ALLOW TAP
E TO RUN FOR ";TAB 8;"AT LEAST 2
0 SECONDS";AT 18,5;"4) [S]AVE OR
 [M]ENU"
9950 IF INKEY$="S" THEN GOTO 999
0
9960 IF INKEY$="M" THEN GOTO 200
9970 GOTO 9950
9980 STOP
9990 SAVE L$
9999 GOTO 200
```

AN UPDATE ON T.I. & T.I. .....KEN ARMSTRONG

Since my last tome, I've added 450 bucks worth of disc drive and expanded memory to the Texas Instruments Home Computer. This sale priced equipment [$1400.00 regularily] completes the system, giving a total of 48K. More memory could be added, but is of questionable usefulness to the computer, as it's not easily accessable. Other peripherals to be added in time might include a printer, RS232 interface, modem, and speech synthesizer. Sale prices are about $100.00 each except for the printer. The EXTENDED BASIC cartridge [$100, of course] was added months ago, giving me the capability of SINCLAIR basic, with a few extra commands. It was the discounted clearance prices that eventually forced me into the disc system. [That and Dave Curry constantly quipping %60 FOR THE SYSTEM%]. Of course he was correct, as the extra equipment gives greater speed, and accessability to more complex and much more interesting programs. [It's easy to become bored from the 16K limited games, unless you've mastered machine code.]

Expanding on these benefits and drawbacks of disk and extra memory systems, the following come to light.

T.I.Update-Ken Armstrong-Cont.

The disk management system leaves only 14K available.

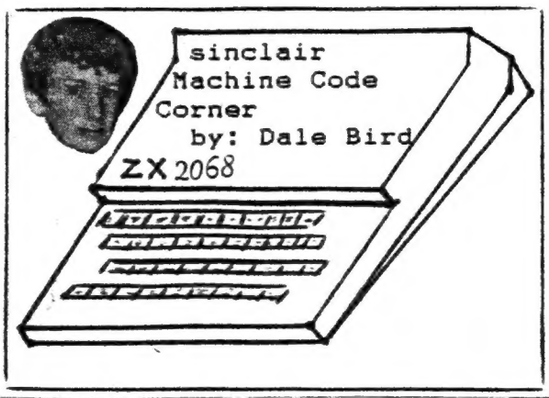
The Extended Basic language gives more commands, minimizes errors, is more forgiving, is more powerful, but also uses up memory.

A 6 minute cassette tape loads in 5 seconds on the disk system. As a matter of fact, it takes 5 or less seconds to save or load any size of program [that's how long it takes to scan a sector of the disk.]

The T.I. system uses single sided, single density disks with 40 sectors

My system includes, console[$65], Extended Basic[$110], Recorder[$70], 32K extra RAM[$100], Peripheral Expansion Box with disk drive and controller[$320], for a total of $665. The initial list price for all this in 1981 would have been about $2500. Sounds like a bargain! However, the QL will likely eclipse this performance, tho' it is 4 years later and uses previously un..rd of technology.

I reccommend going for the system. By the time the components go on sale, there is the additional benefit of copious quantities of programs and peripherals. The Timex Sinclair is now in this situation. System prices are a fraction of those in 1981, so GO FOR IT.



In the future I will be writing this column frequently as Craig will be too busy.

This month I have constructed a machine code program for the 2068 which produces a graphics pattern. Just type in the program in listing 3 and RUN it,that will load the machine code for the DATA statements and POKE them in. To run the program you must type CLS :OVER 1: RANDOMIZE USR 32768 But before doing so SAVE it on tape because once the machine code has been run then there is no way of exiting the program. I have also put in a basic version of this program but its a little slowwer than the machine code one.

Listing 1

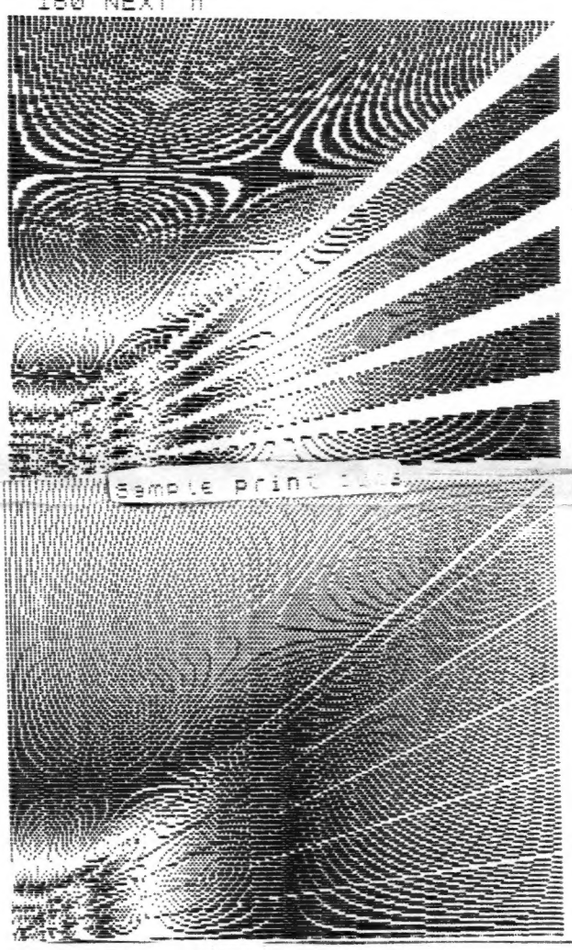
```
32768-6         LD B,255
32769-255
32770-33        LD HL,0
32771-0
32772-0
32773-34,       LD (23677),HL
32774-125
32775-92
32776-17        LD DE,257
32777-1
32778-1
32779-197       PUSH BC
32780-38        LD H,0
32781-0
32782-104       LD L,B
32783-72        LD C,B
32784-6         LD B,0
32785-0
32786-41        ADD HL,HL
32787-41        ADD HL,HL
32788-41        ADD HL,HL
32789-9         ADD HL,BC
32790-9         ADD HL,BC
32791-9         ADD HL,BC
32792-203       SRL H
32793-60
32794-203       RR L
32795-29
32796-203       SRL H
32797-60
32798-203       RR L
32799-29
32800-203       SRL H
32801-60
32802-203       RR L
32803-29
32804-203       SRL H
32805-60
32806-203       RR L
32807-29
32808-69        LD B,L
32809-14        LD C,255
32810-255
32811-205       CALL 10259
32812-19
32813-40
32814-193       POP BC
32815-197       PUSH BC
32816-72        LD C,B
32817-6         LD B,175
32818-175
32819-33        LD HL,0
32820-0
32821-0
32822-34        LD (23677),HL
32823-125
32824-92
32825-205       CALL 10259
32826-19
32827-40
32828-193       POP BC
32829-5         DEC B
32830-5         DEC B
32831-5         DEC B
32832-195       JP 32770
32833-2
32834-128
```

Listing 2

```
 10 LET N=255
 20 POKE 23677,0: POKE 23678,0
REM POKE THE STARTING POINT OF
THE DRAW COMMAND TO 0,0
 30 LET A=INT (N/11/16)
 40 DRAW 255,A
 50 POKE 23677,0: POKE 23678,0:
REM POKE THE STARTING POINT OF
THE DRAW COMMAND TO 0,0
 60 DRAW N,175
 70 LET N=N-3: IF N<0 THEN LET
N=N+256
 80 GO TO 20
```

Listing 3

```
 100 DATA 6,255,33,0,0,34,125,92
,17,1,1,197,38,0,104,72,6,0,41,4
1,41,9,9,9,203,60,203,29,203,60
 110 DATA 203,29,203,60,203,29,2
03,60,203,29,69,14,255,205,19,40
,193,197,72,6,175,33,0,0,34,125,
 120 DATA 92,205,19,40,193,5,5,5
,195,2,128
 130 FOR n=32768 TO 32834
 140 READ a
 150 POKE n,a
 160 NEXT n
```



If you have a simple machine code program you would like me to write for the Machine Code Corner, let me know.

Craig Bird
592-5058

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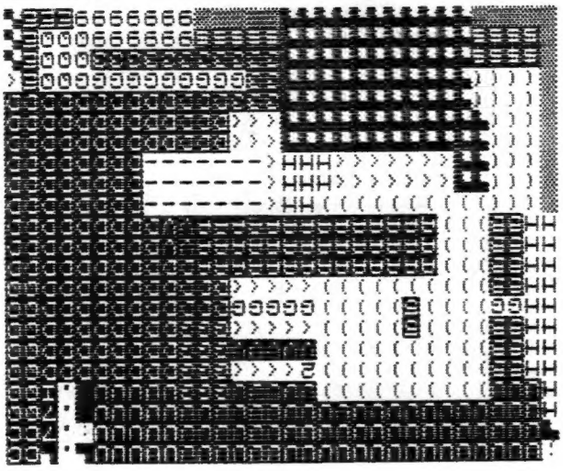
MachineCodeCorner ContinuesNextPage



What's he up to? They ask of Dave Skaalrud "with all those ZX's and other things?" We in the N/L committee snuck up to where he parked his mobile rolling laboratory and spied inside. Expecting to see a wired up whoopee doll or other fascination of apli-tech-tion.

Our voyeurism gleened the following bit of spectical on his tiny screen. A window to leer on the naked code, exposing at will the very secret parts, formerly private to the ZX/TS. The Listing is preliminary and serves for study... more later.

```
8192-THIS MENU-FOR PUSSY CAT
8211-STORE NEW SCREEN HERE
8229-RAMOP DOWN
8278-PROGRAM SAVER (PROGAID)
8313-MERGE (FAST MODE ONLY)
8378-REM MAKER;RAND NUMBER FIRST
8431-REM STATEMENT REMOVER
8477-REMOVE BASIC LINES
8503-RENUMBER BY 10 WITH FLAGS
8588-PRINT MEMORY LEFT
8603-PRINT MEMORY USED
8628-114 BYTES OF "WOW" CODE

9535 TO 10239 STORAGE FOR SCREEN

16000-TAPEREADER-PEEK16507>128?
16096-SCREEN REVERSER
16123-REM INVERSER
16162-COPYMISER. USE IN BASIC
16213-LAST ADDRESS

14516-BETTA BASIC-1284 BYTES
```

```
  10 LET I$(5)=" VERY INTERESTIN
G POSSIBILITIES"
  15 GOTO 40
  20 PRINT "ADDRESS OF MACHINE C
ODE"
  30 INPUT A
  40 POKE 16418,0
  41 FOR N=0 TO 23
  42 PRINT "
                                "
  43 NEXT N
  45 GOSUB 500
  46 GOTO 800
  50 LET B=INT (RND*23)+1
  51 LET I=INT (RND*5)+1
  52 PRINT AT 23,0;I$(I)
  60 LET C=INT (RND*8)+1
  70 LET D=INT (RND*32)
  80 LET E=INT (RND*(32-D))
  90 LET F=INT (RND*63)+(128*((R
ND*2)<1))
 100 LET G=INT (RND*3)+2
 101 IF INKEY$="Z" THEN COPY
 102 IF INKEY$="L" THEN GOTO 700
 103 IF INKEY$="R" THEN GOTO 5
 104 IF INKEY$="S" THEN GOTO 200
0
 110 GOSUB (100*G)
 120 GOTO 50
 200 POKE (A+5),B
 210 POKE (A+7),C
 220 POKE (A+20),32-D
 230 POKE (A+25),E
 240 POKE (A+30),F
 250 LET H=USR A
 260 RETURN
 300 POKE (A+44),B
 310 POKE (A+46),C
 320 POKE (A+59),32-D
 330 POKE (A+64),E
 340 POKE (A+85),F
 350 FOR H=1 TO C
 360 LET J=USR (A+39)
 370 NEXT H
 380 RETURN
 400 LET H=USR (A+94)
 410 RETURN
 500 LET S=USR (A+94)
 510 PRINT AT 23,0;"A GRAPHIC DE
MONSTRATION. ANY KEY"
 520 IF INKEY$="" THEN GOTO 500
 530 RETURN
 700 CLS
 710 LIST 0
 800 LET B=23
 801 LET C=23
 802 LET D=0
 803 LET E=0
 804 LET F=136
 805 GOSUB 300
 807 GOTO 50
1000 LET V=0
1001 PRINT "MACHINE CODE FOR PRO
GRAM ""WOW""","READ FROM LEFT TO
 RIGHT","----------------------
---------"
1004 FOR N=0 TO 113
1010 PRINT TAB V;PEEK (16514+N);
1015 LET V=V+4
1016 IF V>31 THEN LET V=0
1020 NEXT N
1021 PRINT TAB 0,,"TOTAL OF 114
BYTES, AND CAN BE PLACED ANYWHE
RE IN MEMORY"
1025 STOP
2000 CLS
2001 PRINT ,,,,,,"START RECORDER
, THEN ANY KEY"
2002 PAUSE 4E4
2003 CLS
2004 GOTO 4
9000 FOR N=0 TO 113
9010 POKE 8628+N,PEEK (16514+N)
9020 NEXT N
9030 SLOW
9040 GOTO 50
```

Q: WHATS A GUY WITH TWO SINCLAIRS AND A TAPE RECORDER?
A: A GUY WITH LOADING PROBLEMS!

Q: WHATS A GUY WITH TWO SINCLAIRS AND TWO TAPE RECORDERS?
A: THE SAME GUY WITH MORE LOADING PROBLEMS!

Q: WHAT DO YOU SAY WHEN YOU SEE A GUY WITH 5 SINCLAIRS AND 8 TAPE RECORDERS?
A: "HI DAVE."

Continued

..THE PIRATE'S CORNER.....

While Jake travelled south into the land of the silicon chip, I ventured north to Nanaimo, where the dollar is still at par. In a little shop called THE COMPUTER CLINIC I came across some living and breathing BBC and ORIC computers. Quite impressive. There on the shelves were SINCLAIR goodies. A good collection of programs plus a few pieces of hardware, all for the ZX81. The word from them on the 2068 is, 00000. NOTHING. Jake was to check what the situation is like down south, any news will be good.

On making a few phone calls recently, I've found that most have been spending the summer with the computers under wraps, like me, and are now getting keen once again.

The only new books I've been reading in the last few months have been magazines. The English one's are excellent, containing good programs, and informational articles. The proagrams are usually in machine code, so I've been trying to read up. I think a course on the subject would be the answer. Computer School, here I come.

The programs that I've been playing with are the old one's. I've been going through VUcalc, WSII, and PENETRATOR. Plus lots of little exercises, a lot like reading light books. Well, Fall is here, so we'll get into more heavy going.

Nuff said.....

by D. CURRY

AUG 22,1984 Ken Kenney
#1211-1115 Nelson,
VANCOUVER, B. C.
V6E 1J4

Have just today had a look at two of your News Letters and despite the fact it was only yesterday that I mailed you my membership application and fee; I just cannot resist sending you folk a resounding WELL DONE! GOOD SHOW! - really!

Aside from trying the fatten print routine and complimenting you all for what looks like a great job I would like to get my two-bits worth in re:THE FIRSTLO ADER program

My knowledge of M/C (& a great deal of everything else) is very limited BUT I can at least take pride in the ability to follow simple instructions. ANYWAY, I had enormous trouble with that Firstloader affair but maybe, just MAYBE I have stumbled upon something critical. I am not in the least certain if the filter came first or last. Does not matter as the END RESULT IS, OR WAS %99.99 success.

What I believe finally did it was the tedious job of RE-SAVING all the programs I wished to transfer to 2068 tape-format onto brand-new, good quality, virgin tapes (2); and all saved (need I say it?) at precisely the same level.

---That done, I spent 10 minutes making up a filter as per the SYNTAX article (Dec 83). Just a .22uf cap IN the EAR plug line & a 1k resistor across the computer side of the cord.

NOW COMES THE UNBELIEVABLE part! Maybe it is my TS ~~2050~~ 2020 recorder(but more likely a plain fluke) but when I was set-up to begin; with an ear plug to catch the silent part of the tape etc. ;----I JUST TURNED EVERYTING W I D E O P E N !----- and the ZX/TS programs loaded into the 2068 like magic!

7

I have transfered SEVENTY-TWO programs, of which ONLY TWO failed to load first time!!!

That must be 3 months ago and I still haven't gotten around to editing them out to RUN on the 2068. That is another story. -Why the recorder works so well at Maximum Volume is a mystery. -Why NEW COPIES on NEW TAPES is a bit more understandable.''' - ----or am I just lucky, ------for once?

To summarize:

1) Make new copies of the ZX/TS programs on NEW TAPES

2) Use a filter.

3) Get WELL INTO the silent bit just before the program proper BEFORE activating the RANDOMIZE USR 45000 call --and however silly it may sound BE SURE YOU ARE USING RANDOMIZE (not RAND) and USR (not U,S,R)!

4) And, at least for my set-up, SET THE VOLUME WIDE OPEN -----and let 'er rip!

Well chaps, that is my effort for this time. Have been trying to get this fat-print thing to work automaticaly. Really don't know what I am doing. Just playing around with IF PEEK 23692 THEN RANDOMIZE (and COPY)(maybe OPEN #2,"p"-instead). It's half working:- the first 4 paragraphs were printed out in one shot. BUT look at all that wasted paper.

Am I ever behind you fellows in your efforts to provide support for the 2068 - without having to bang our foreheads at Uncle Sams feet everytime we want to get ripped-off, AND REMAIN, with all best wishes for every success,

Ken Kenney

submitted by Russel Gaudin, plagerized from EMAP PUBLICATIONS' SINCLAIR USER . EMAP 67 Clerkenwell Road, London EC1R 5BH 12issues £12+overseas p&p

Programming In Basic

BY BRIAN FOWLER

Writing Your Own
a.k.a.
Program Development Cycle

As you know, the easiest ways to acquire software for your computer are; to shell out some dollars to the local merchant (or mail order) and buy it, find some public domain software that will do the job you want and key it into the computer (can be long and tedious), find a piece of general software and customize it to suit your needs, or you write your own.

If the software you are looking for is not availible, you have no choice but to write your own. When you have finished, you will have a program that will meet your exacting and specific requirements. Who knows, you may find out that others have a need for such a program, and make a handsome profit from its sales.

Some people are very lucky, in that they can write a concise, user-friendly, working program, "By the seat of their pants" (Consider yourself lucky if you are in this 1%). Most of us though, must follow a set of steps, to create a good program. This procedure is called the Software Development Cycle.

I am not proposing any shortcuts or a way out of completeing the peliminaries. I am giving you a very simple, straightforward process to design a USEABLE PROGRAM.

Unless you are one of those lucky few, this process may be easier for you to use. The most important thing to remember is, "Don't be in a hurry to code!". The more time you spend with a pencil (Programmers ONLY use Pencils) and paper, in the initial design stages; the better your chances are of completing a program that will run. Remember, there are No Shortcuts to Successful Programming. Always keep in mind the Program Development Cycle:

* Analyze your needs
* Design the specifications
* Flowchart your solution
* Code from your flowchart
* Test your code thoroughly
* Debug your program completely
* Keep up-to-date documentation

A computer works only as well as the program in its memoory. If you do not know what you want the program to do, valuable time can be spent "Stumbling around in the dark". A good place to start (with your pencil and paper), is with the output. Since most user-friendly software is menu driven, you could begin by laying out on paper any menus, and the final output for your program. Next, you could design the input, with the prompts and input screens properly laid out.

Once you have finished designing the menus, output, and input screens. It is now time to draw the flowchart (more about this in a future column) of the complete program. This should be the longest part of the design process. These should detail the entire logic of the program. Subroutines, complex calculations, or any other part of the program that you feel, should have detailed individual flowcharts. Proper flowcharting, and expanding the main chart in detail, will help you to understand the process of the program, and help to eliminate logic bugs. Don't hesitate to walk through your chart with some simulated data. Restructure it if you find any bugs.

With the flowcharts all finished, now finally you can begin coding your program from the flowcharts, into the computer. The coding procedure only deals with the translation from the flowchart into Basic. The only problems that should be encountered are syntax errors. Hopefully, you encountered the logic errors in the flowcharting analysis.

Proper design, good programming techniques, and stub testing should make testing and debugging a fairly easy process. Test the program module by module. Proceed to the next, and more detailed modules, only after satisfactory results have been obtained.

Nobody is perfect, so if logic errors are detected, or you just want to make enhancements to the software, don't immediately apply them to code. Go back to the design and analysis stages. You should think them through, and make the changes in the flowcharts, before altering the program.

You will soon find that efficiently coded, modular programs are easier to maintain, and if the need arises, they are easier to modify.

Now you have a piece of software that works. You designed, coded, and debugged it, and then you tested it to make sure. There is only one more thing to do. Prepare yourself a User Manual, describing all the prompts, RUN procedures (Whether to use the RUN command or a GOTO command to execute the program), and how to handle any error conditions that may arise. Don't try to kid yourself into believing that you'll be able to remember all the program idiosyncracies forever; you'll find that soon afterwards, it may seem as if someone else wrote it!

Keep the specifications, flowcharts, program listing, and documentation (More on Documentation in a future column) in a safe place. Don't forget to make several copies of your working program.

CONGRATULATIONS! You have just designed and produced an efficient computer program using the Program Development Cycle (Now that wasn't hard was it??).

Next month I will show you a step-by-step method for customizing general softare.

If you have any queries, comments, or questions about the column, or you just need some help with a programming problem, give me a call at 388-9353, or drop me a line c/o Victoria Sync Association. see you next month! Brian...

and even more...

Here is a little list that I found in an old issue of Timex-Sinclair User magazine. It's called, oddly enough, "Program Development Cycle". For more details, read "Programming In Basic" in this month's newsletter.

1. Decide what type of program you want, and what you want it to do. It is best to write it as a series of statements in plain english.

2. Decide how you are to handle the task and whether it can be done with your machine, and the level of experience you have.

3. Break the task into a series of headings and sub-headings. For example, most programs need some form of instructive display to act as an entry procedure, a calculation procedure,and an output procedure. They must be tailored to meet your needs.

4. Draw a flowchart. That should take a long time in many cases. It's a good idea to draw several charts, expanding the most important boxes in the main one. In that way, you will know the concepts of the program before you begin coding.

5. Coding the program. The code (language), should be laid out in separate modules. The control module should be put at the top, as it's the part of the program which will be used the most. Each module should be complete and "GOTO" statements should be to a local module, if possible.

6. Clear system bugs. In long programs, bugs or errors, are liable to occur frequently. Bugs occur usually in the data entry parts of the program and in the flow structure. Flowchart design and structured programs will not dispose of all bugs, but it will eliminate a few.

MACHINE CODE CORNER

BY DALE BIRD

LISTING Number 1.-for 2068

```
 10 CLEAR 63832
 20 FOR n=32 TO 127
 30 PRINT CHR$ (n);
 40 NEXT n
 45 INPUT a$
 46 LET x=0: LET y=0
 47 CLS
 48 GO SUB 9900
 49 STOP
 50 DATA 0,0,0,0,0,0,0,0,0
 60 DATA 2,2,2,2,2,2,0,2,0,0
 70 DATA 5,5,5,0,0,0,0,0,0,0
 80 DATA 2,7,2,2,2,7,2,2,0,0
 90 DATA 2,3,4,2,1,6,2,2,0,0
100 DATA 5,5,1,2,4,5,5,5,0,0
110 DATA 2,5,2,6,5,2,3,0,0,0
120 DATA 2,2,2,0,0,0,0,0,0,0
130 DATA 1,2,4,4,4,2,1,0,0,0
140 DATA 4,2,1,1,1,2,4,0,0,0
150 DATA 0,5,2,7,2,5,0,0,0,0
160 DATA 0,2,2,7,2,2,0,0,0,0
170 DATA 0,0,0,0,1,1,2,0,0,0
180 DATA 0,0,0,7,0,0,0,0,0,0
190 DATA 0,0,0,0,0,0,2,0,0,0
200 DATA 1,1,2,5,5,2,4,0,0,0
210 DATA 2,5,5,5,5,5,2,0,0,0
220 DATA 2,6,2,2,2,2,7,0,0,0
230 DATA 2,5,1,2,2,4,7,0,0,0
240 DATA 6,1,1,6,1,1,6,0,0,0
250 DATA 5,5,5,7,1,1,1,0,0,0
260 DATA 7,4,4,6,1,1,6,0,0,0
270 DATA 3,4,4,7,5,5,2,0,0,0
280 DATA 7,1,1,2,5,4,2,0,0,0
290 DATA 2,5,5,2,5,5,2,0,0,0
295 DATA 3,5,5,3,1,1,6,0,0,0
300 DATA 2,2,0,0,0,2,2,0,0,0
310 DATA 2,2,0,0,2,4,4,0,0,0
320 DATA 0,1,2,4,2,1,4,0,0,0
330 DATA 0,7,0,0,7,0,0,0,0,0
340 DATA 0,4,2,1,2,4,0,0,0,0
350 DATA 2,5,1,2,5,2,2,0,0,0
360 DATA 2,5,1,3,5,5,5,0,0,0
370 DATA 2,5,5,7,5,5,5,0,0,0
380 DATA 6,5,5,6,5,5,6,0,0,0
390 DATA 3,4,4,4,4,4,3,0,0,0
400 DATA 6,5,5,5,5,5,6,0,0,0
410 DATA 7,4,4,7,4,4,7,0,0,0
420 DATA 7,4,4,7,4,4,4,0,0,0
430 DATA 3,5,4,4,5,5,3,0,0,0
440 DATA 5,5,5,7,5,5,5,0,0,0
450 DATA 7,2,2,2,2,2,7,0,0,0
460 DATA 1,1,1,1,1,5,2,0,0,0
470 DATA 5,5,6,4,6,5,5,0,0,0
480 DATA 4,4,4,4,4,4,7,0,0,0
490 DATA 5,7,7,5,7,5,5,0,0,0
500 DATA 5,5,7,5,7,5,5,0,0,0
510 DATA 7,5,5,5,5,5,7,0,0,0
520 DATA 7,5,5,7,4,4,4,0,0,0
530 DATA 7,5,5,5,7,5,1,0,0,0
540 DATA 7,5,5,7,6,5,1,0,0,0
550 DATA 3,4,4,2,1,6,2,0,0,0
560 DATA 7,2,2,2,2,2,2,0,0,0
570 DATA 5,5,5,5,5,5,7,0,0,0
580 DATA 5,5,5,5,5,7,2,0,0,0
590 DATA 5,5,5,5,7,5,5,0,0,0
600 DATA 5,5,5,2,2,2,2,0,0,0
610 DATA 7,1,1,2,4,4,7,0,0,0
620 DATA 7,4,4,4,4,4,7,0,0,0
630 DATA 4,4,2,2,2,1,1,0,0,0
640 DATA 7,1,1,1,1,1,7,0,0,0
650 DATA 2,7,2,2,2,2,2,0,0,0
660 DATA 0,0,0,0,0,0,0,0,0,15
670 DATA 1,2,2,7,2,2,7,0,0,0
680 DATA 0,0,6,1,3,5,3,0,0,0
690 DATA 0,0,4,4,6,5,6,0,0,0
700 DATA 0,0,6,4,4,5,3,0,0,0
710 DATA 0,0,1,1,3,5,3,0,0,0
720 DATA 0,0,2,5,6,4,3,0,0,0
730 DATA 0,0,1,2,6,4,2,0,0,0
740 DATA 0,0,2,2,5,3,1,0,0,0
750 DATA 0,0,4,4,6,5,5,0,0,0
760 DATA 2,0,2,2,2,2,7,0,0,0
770 DATA 2,0,2,2,6,5,4,0,0,0
780 DATA 0,0,4,5,6,5,5,0,0,0
790 DATA 0,0,2,2,2,2,1,0,0,0
800 DATA 0,0,5,7,5,5,5,0,0,0
810 DATA 0,0,4,6,5,5,7,0,0,0
820 DATA 0,0,7,5,5,5,7,0,0,0
830 DATA 0,0,7,5,7,4,4,0,0,0
840 DATA 0,0,7,5,7,4,4,0
850 DATA 0,0,2,5,3,1,1,0
860 DATA 0,0,4,6,5,4,4,0
870 DATA 0,0,3,4,2,1,6,0
880 DATA 0,0,2,7,2,2,2,0
890 DATA 0,0,5,5,5,3,1,0
900 DATA 0,0,5,5,5,5,2,0
910 DATA 0,0,5,5,5,7,5,0
920 DATA 0,0,5,5,2,5,5,0
930 DATA 0,0,5,5,3,1,6,0
940 DATA 0,0,7,1,2,4,7,0
950 DATA 1,2,2,4,2,2,1,0
960 DATA 2,2,2,2,2,2,2,0
970 DATA 4,2,2,1,2,2,4,0
980 DATA 9,5,9,5,9,5,9,5
990 DATA 0,0,3,4,4,4,3,0
1000 FOR n=63832 TO 64599
1010 READ a
1020 POKE n,a
1030 NEXT n
1040 RESTORE
1050 FOR n=64600 TO 64600+767
1060 READ a
1070 LET a=a+16
1080 POKE n,a
1090 NEXT n
1100 STOP
2000 IF a=1 THEN LET a=3: RETURN

2010 IF a=2 THEN LET a=12
2020 IF a=3 THEN LET a=15: RETUR
N
2030 IF a=4 THEN LET a=48
2040 IF a=5 THEN LET a=51
2050 IF a=6 THEN LET a=60
2060 IF a=7 THEN LET a=63
2070 IF a=15 THEN LET a=255
2080 RETURN
9900 LET a=63832-256
9901 POKE 23607,INT (a/256)
9902 POKE 23606,a-256*PEEK 23607
9903 PRINT AT x,y;
9905 FOR n=2 TO LEN a$ STEP 2
9910 PRINT a$(n TO n);
9920 NEXT n
9940 LET a=64600-256
9941 POKE 23607,INT (a/256)
9942 POKE 23606,a-256*PEEK 23607
9950 PRINT AT x,y;
9960 FOR n=1 TO LEN a$ STEP 2
9970 PRINT OVER 1;a$(n TO n);
9980 NEXT n
9990 RETURN
```

```
 !"#$%&'()*+,-./0123456789:;<=>?
@ABCDEFGHIJKLMNOPQRSTUVWXYZ[\]↑←
`abcdefghijklmnopqrstuvwxyz{|}~©
(C)
```

This program for the 2068 prints on the Printer and on the screen in 64 columns print. WITH THIS PROGRAM IT IS ADVISED YOU USE ALL CAPITALS AS THEY ARE MORE READABLE. 64 COLUMNS ARE OBTAINED BY MAKING 2 CHARACTER SETS DESIGNED ON A 4X8 GRID INSTEAD OF ON A 8X8 GRID SO IT CAN SQUEEZE 2 CHARACTERS ON EACH 1 8X8 CHARACTER BLOCK USING THE OVER COMMAND.

LISTING Number 20.-for ALL

```
Editors note:
Listing 20 is a
portion of a
program Dale is
working on it
was stolen by
the newsletter
committee before
it was finished.
it is submitted
to the readers
to debug.
```

```
 10 IF PEEK 23607<>60 THEN GO T
O 100
 15 CLEAR 64399
 20 LET a=64600
 30 POKE 23606,INT (a/256)-1
 40 POKE 23607,a-256*PEEK 23607
-256
 50 FOR n=0 TO 767
 60 POKE n+a,PEEK (15616+n)
 70 NEXT n
100 PAPER 0
110 INK 0: GO SUB 9000
120 INPUT a$: DIM a(8,8): DIM b
(8,8)
121 IF CODE (a$)>143 THEN LET a
$=CHR$ (CODE (a$)-1)
124 LET z$=a$
125 PRINT AT 0,0;
130 LET a=6434
140 LET b=a+CODE a$*8
150 FOR n=0 TO 7
160 LET c=PEEK (a+n)
```

WARNING: this program has a few bugs!

LISTING CONTINUED THIS PAGE---)↑

Q: HOW DO YOU TELL A REAL SINCLAIR FAN?
A: IT HAS NO SWITCH AND IT HAS A LARGE POWER PACK. TO PLUG INTO THE WALL.

Q: WHAT DID SIR CLIVE SAY WHEN HE FIRST SAW A ZX81 LOAD CORRECTLY?
A: THANK GOD IT'S ONLY JULY 1984!

IN OAK BAY YOU SAY? A CLIVE DRIVE? A SPECTRUM SCHOOL OUTSIDE OF VICTORIA AND THE SOCREDS OUT OF OFFICE BY 2068?

DEFINITION: BORN LOSER!
A MAN WITH TWO SINCLAIRS

Q: WHAT DO YOU GIVE A MAN WITH TWO SINCLAIRS?
A: TITLE TO THE BROOKLYN BRIDGE!

A MAN WALKING DOWN THE STREET WITH TWO SINCLAIRS - ANOTHER MAN SAYS "WHAT ARE YOU DOING WITH THAT GARBAGE?" ... "HE'S OUR OWNER!".

Q: WHAT DOES CLIVE SINCLAIR DO WITH A DEFECTIVE ZX81?
A: HE SELLS THEM!

STEPS TO DISCOVER A DEFECTIVE SINCLAIR.
1. OPEN BOX.
2. READ LOGO.
3. GOTO 1.

Continued

(uncle) — Jake Leiberherr

2068 Corner

WELL. Here it is September, and I have just returned from the good ol' USA. I did not get to check out as much computer connection stuff as I would have liked, but what I did find out was interesting. Coupled with some news from Gary Faryon on my return, it adds up to good news and bad news, folks.

First, the bad news. If you are holding back buying a 2068 or 2068 related equipment or software while waiting for the price to drop, you may have to wait quite awhile.

Now, the good news. If you are worried about availability of such stuff, take heart. I base my opinion on a visit to an outfit called Sunset Electronics, located at 2254 Taraval St., San Francisco, CA 94116. I have their catalogue or you can order one from them for a non-beaver buck. (Save your money, it's not a great catalogue, no sexy equipment to drool over, no good informative description, just the names and prices folks.)

Sunset is located in a semi-genteel area about six blocks north of the San Francisco Zoo. It is a small store that handles T/S goodies and Commodore, with, strangely enough, more T/S than Commodore. They had lots of 2068 software. They had both modems in stock. They had 2068's. They had T/S 1000's. They had RAM packs. They had T/S 2040 printers, and they had Alphacom 32's (The 2040 as now labelled and marketed by the manufacturer, as the former Timex, now Westridge, modes.)

They also had the two dumbest bozos I have ever encountered working in a computer store. The owner was not present, so don't blame him. But take my word for it, it would be economic suicide to phone this outfit to get information. I wanted a book on interfacing of peripherals. The price was not marked on the book. "How much is this book?" I asked Bozo I. He looked up from his novel. He examined the cover and inside pages, much as I had just done. "Hey, what's the price on this book?" he called out to the rear of the store. "What book?" called out Bozo II. (Bozo II never did appear, he remained out of view behind a divider, where he must have been reading because I could not discern any keyboard hacking or sleeping noises.)

Bozo I called out the name of the book. I went on browsing. I decided I would like to see some of the available software running, because we all have been stuck with a Circuit Board Scramble or an Androids at some time. I asked Bozo I. He said that they were not allowed to do that. He had only been working there a week, and the boss had specifically told him not to do that. Well, how much is it? The prices are in the catalog. He started to look annoyed with my interruption of his reading. I browsed through the catalog. When finished, I inquired again about the price of the book. He looked really annoyed. He called out again to Bozo II, who again called out "What book?", and Bozo I called out the name again. This time, though, Bozo I got up and walked over to the bookshelf to examine the covers of the other books, much in the manner that I had back at the beginning. Then he went back to his book. I tried to load some adventure software (Fall of the Third Reich) onto the 2068 with the Timex Recorder. Four tries and bad read reports every time, even with both sides of the cassette. (The cassette was already in the machine, so I didn't ask the permission of either Bozo.) Judging from the appearance and performance, I would stick with the old Brand X tape recorder.

I returned to the front desk. "Well?" "What?" "How much is the book?" And you know it, the same old routine. But this time, after five minutes, we got a reply.

So much for service. Don't be too critical, though. Throughout my visit, my 15 year old daughter was first surprised, then amazed, by the continual sightings (for her, the first time in her lifetime) of HELP WANTED signs. The economy is booming down there, and the quality of staff in store/restaurant jobs understandably is not up to the Canadian model of university graduates only.

Back to computing. The prices have not slipped at all in the last six months. To me, a sign that the bottom has been reached. On my return, I talked with Gary. He has connected with an outfit that gave him a delivery in two weeks. A retailer's newsletter that he got says that products for the 2068 are now increasing. He has ordered a directory that contains the names and numbers of 2000 2068 owners with modems. Sounds like the early days of ZX80 and MicroAce.

What I bought: A good copy of the 2068 schematic. (The Technical Manual that I mentioned last month has still not arrived, but I did get a note on my return that said, sorry, they were temporarily out of stock, but that they would ship it as soon as they got more. From Timex???? What next? A magazine from the Publishers of Creative Computing?

A damn fine book on interfacing. To be reviewed in next month's issue.

The Zeus Assembler. Review right here and right now.

Having bought the above item like a pig in a poke, I had lots of worries about what it would be like when I got it back home. I lucked out. Having worked with both ZXAS and Aknai's Assembler, I have no hesitation in saying that this combines not just the best features, but all functions of both, and then proceeds to supply all kinds super utilities. Excellent manual, and without question the most professional piece of software that I have ever run on a Sinclair computer. An unqualified 'must-have' for the assembly language programmer. It makes the assemblers for the ZX81 look primitive.

Also bought : Four fast-loading programs from Mindware for the ZX81, at the price of a buck each.

Pilot: Total dog. Slow, you only see the gauges, a real classic garbage piece.

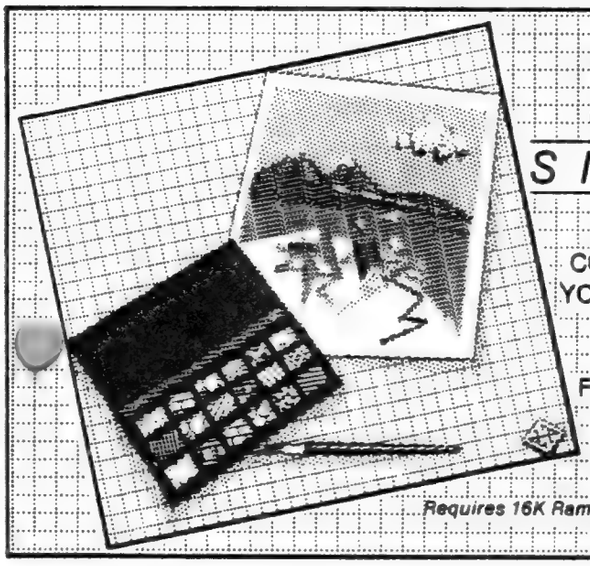
Gulp: A maze game. I give it a 2. When you eat up all the dots, that's it. Software collectors only.

Labyrinth: Haven't tried it yet.

Cosmos: At last, a winner! I played this space shoot-em-up for an hour when I first loaded it, played it some more that night, and even left the auto-running display on and sat back and watched it. A 10. See it at the meeting.

Well, that's all folks. Next month Uncle Jake expects to have his modem. The month after that Uncle Jake expects to have a five pound phone bill.

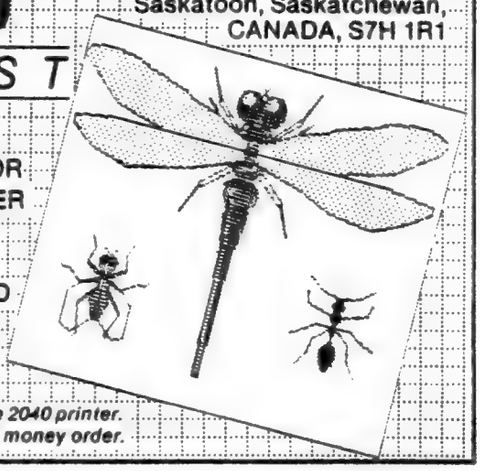
THIS IS A NEW MEMBER'S AD - HE DID THE FANCY ARTWORK IN THE LAST ISSUE



ZX81/TS1000

SINC-ARTIST

SINC-ARTIST IS A MACHINE-CODE GRAPHICS PROGRAM FOR YOUR ZX81 OR TS1000 COMPUTER ALL COMMANDS ARE MENU-DRIVEN, AND ALL GRAPHIC FUNCTIONS ARE CONTROLLED BY CURSOR



callisto software
924 2nd. Street East
Saskatoon, Saskatchewan,
CANADA, S7H 1R1

Requires 16K Ram, 8K Rom. Resolution is 256 x 192 on the 2040 printer.
$10.00 personal check or money order.

contributed by Gary Faron

2068 — SUPPLEMENTARY . . .

2068 List

There has been a few requests from members to print a list of 2068 owners. We hope to add around 10 more names to this by next issue.

Dave Curry	Doug Couzens
Tom Carron	Gary Faron
Dale Bird	Dee Shoolingin
Stu Montgomery	Rudy Rugg
Jake Lieberherr	

2068 PROGRAM POOL

As the 2068 grows in our club the demand for good programs grows with it. To satisfy this need we have instituted the 2068 Program Pool.

The pools function is to make available programs at a Very Low Cost. Ranging from $1. for a simple game to $13. for a power-full word processor.

The Pool is generating most programs from local Programers. The Pool will start off with 25 excellent programs.They will be available by Oct.1/84 through Jake or Gary and at the next meeting.

Loading Tip

If you ever run into a bought or special program and could not quite load it, you might try this.

ist Make sure your getting a good sound track by pulling the ear plug out and listening to it. If your not sure and don't have a Winkey Board to test it with, turn the volumn low until you can just hear it. Then with a tiny screwdriver adjust the play heads through the hole in the case near the recording heads. Start the tape playing you wish to load. Insert the screwdriver until you can feel the screw under it. Remembering how far you turn it, turn the screw slowly first one way then the other untill you hear the loadest sound. Then turn up the volume to it's highest level, rewind the tape to the start and try to load again. Keep the screwdriver handy because after you have loaded the program you will want to return the head to its orginal position. This should correct most the problems you will have with loading tapes.

"But it was so friendly in the store!"

Outlook Bright for New Products and Services

Buyer's Guide---A Corner on the Market.

Immediately after TIMEX quit the computer business, it was kind of hard to tell where TIMEX-Sinclair computing was going in the United States. For computer owners, it was a matter of worrying about where you'd get support for the computers you had bought. For businesses like E. Arthur Brown Company, it was a matter of whether we could make enough money giving that support to pay for expenses and make a profit.

Things looked pretty bleak there for a while. With all of the screw-ups and poor management from TIMEX, most dealers and distributors hadn't been making any money for quite some time before the big announcement. The TS2068 looked like it was going to pull us all back on track. But TIMEX started messing up the market for that one, too. Then, when TIMEX quit, many dealers just decided they'd had enough and gave it up. You get to a point where you're tired of fighting after awhile.

Now that the dust has settled, I can see a bright star on the horizon for TIMEX computerists and Sinclair computers in the U.S. Unlike other companies that quit computers (ie. Texas Instruments), TIMEX wasn't the brains behind their machines. Sinclair Research of England designed them. Now, *they're* quite healthy and happy with the computer business. Their ZX Spectrum, essentially the same computer as the TIMEX 2068, has sold over a million units world wide. They've even made a deal with an oriental campany to manufacture the popular ZX-81 computers again. These are essentially the same as the TIMEX 1000. Finally, Sinclair plans to re-enter the U.S. market this Fall with the Spectrum and ZX-81 as well as their new business computer, the Q.L.

Most of the software and peripherals that work on Spectrums and ZX-81s will work on TS2068s and TS1000s with little or no modification. This means that TIMEX computer owners will again have the support of a major manufacturer. It also means a continuing market for companies who sell to TIMEX and Sinclair owners. And, its a message of stability to software and peripheral developers who need to know there's a future before investing in new products.

Already the flood of converted Spectrum software and peripherals has begun. For Example the new Tasman line of RS232 and Centronics interfaces, word processing, and utility software. A new line of English games is in here, too. And, the RGB conversion kit for those of you who want the perfect picture afforded by RGB monitors. All of these are brand new products for your TS2068 computer. Even more are coming!

Many of you are probably wondering when the microdrives will be available. They've been available for some time now in England. I expect them in the U.S. this Fall or early '85 when Sinclair will be selling them. In the mean time, Some Stores are importing a commercial mini-disk drive from that country. It's supposed to handle a megabyte of data and cost around $700. You'll spend about as much or more for less memory on 8 microdrives, but the mini-disk unit won't create such clutter on your desk. I suspect Sinclair is thinking along the same lines... Rumor has it he struck a deal with Hitachi for a mini-disk drive.

On the home front, there are some rugged individualists that have answered the call to keep the public informed. The major magazines may have folded, but you can get some pretty top notch information from TS Horizons.

Yes, the outlook is bright for owners of TIMEX and Sinclair computers. We'll try to keep you informed as we search out and find the latest new products.

As far as the future of North American production of the TS 1000 & 2068 is concearned the rumors are flying.It is reported that as many as 14 interests are trying to obtain Timex's old production rights.Mean while Sir Clive has announced that his Sinclair ZX/81, Spectrum,and the QL will be marketed in North America by Sinclair.This latest plan of attack is to start this Fall and be in full operation by Spring 85.

Continued

2068 — SUPPLEMENTARY — Cont.

The 2068 Super System, Still a Big Future.

We all know the first TIMEX computer was more than a toy. In fact, it was more computer than most people ever realized. But it got caught in the middle of the computer price wars of 1983 and was strangled.... a tremendous defeat for TIMEX. Business gossip sheets like the Wall Street Journal were predicting that TIMEX was going to fold it's computer division.

TIMEX set themselves to the task of designing the best machine they could. They decided they'd rather be the best, not the cheapest. The result is the new TIMEX 2068 Professional computer.

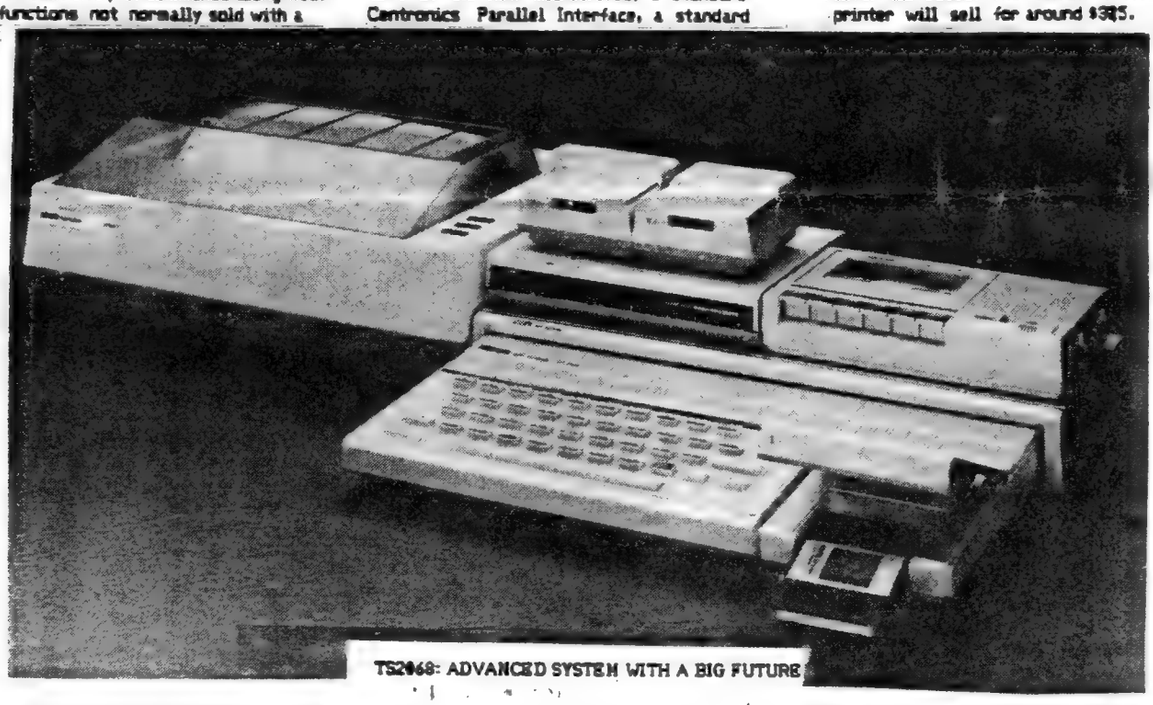
Since it's quiet release in November, the TS2068 has been an overwhelming success. With very little advertising, it's been tough producing enough of them to keep up with sales. Every computer magazine and trade journal that's tested it has given it rave reviews. And for good reason. It's capable of 16 color displays with up to 512 X 192 resolution. It has a full typewriter format keyboard with dual shifts, caps, and space bar. It has 72K of memory of which 24K is a sophisticated operating system and 48K is useable RAM. It's cartridge port can hold an additional 56K of programming. It's futuristic bank switching facility can handle up to 16 Megabytes of memory. This sort of memory is unprecedented.... you haven't seen it in any other personal computer at ANY price. Programming the TS2068 is a cinch. It has the world famous Sinclair BASIC language.... meaning one touch entry of commands along with extended functions not normally sold with a stock computer. For example, programming a sine wave on the TS2068 takes only 5 steps. It takes 15 steps on a Commodore 64. Concentric multicolored circles take 6 steps on the TS2068, 21 on the C-64. A Semi circle takes 2 steps, 16 on the Commodore 64. And, you don't have to wait until you run the program to find bugs. The TS2068 has automatic syntax error checking.... it knows what commands you're supposed to give it and it tells you as you program!

The TS2068 has some remarkable visual capabilities. You can display up to 64 characters on the screen. The "screen" can be anything from a black and white or color TV to a green or amber monitor, to a composite video color monitor, to an RGB color/green monitor.... it can handle the best monitors available, but since it doesn't have to, you can grow with it. There are sophisticated sound synthesis features, too. Up to 4 channels or sounds can be running at the same time, each somewhere in it's own 8 possible octaves!

I tend to run off at the mouth a bit when I write about this machine.... there's so much to tell. But, it'll have to be cut short to leave space for a description of the TS 2068 "System." It appears that TIMEX wanted to leave nothing to chance. This computer had to be so far ahead of things it couldn't fail. The first part of the system is the expansion bus. For approximately $ 4on this unit provides the interface and controller for up to 8 of the new microdrives, a standard Centronics Parallel Interface, a standard RS232 Interface with selectable baud rate, a standard Composite video port, a standard RGB port, networking capability for an up to 64 computer network, CP/M mode with optional 32K of additional RAM, and an auxilary audio output jack. Essentially, the expansion bus permits you to connect your TS2068 to virtually any peripheral on the market.

Mass memory storage is another flexible part of the TS2068 system. Start out with the TS2020 Program recorder, only $69.95. When you're ready, step up to the microdrives. These ultra high speed drives hold about 85K of storage and transfer 48K in approximately 9 seconds. You access files in 3.5 seconds. This is faster than many disk drives! The technology is in an advanced specially lubricated tape LOOP with stationary head. The drives are inexpensive (about $169) small, (about the size of a hockey puck), and you can have up to 8 of them going at once!

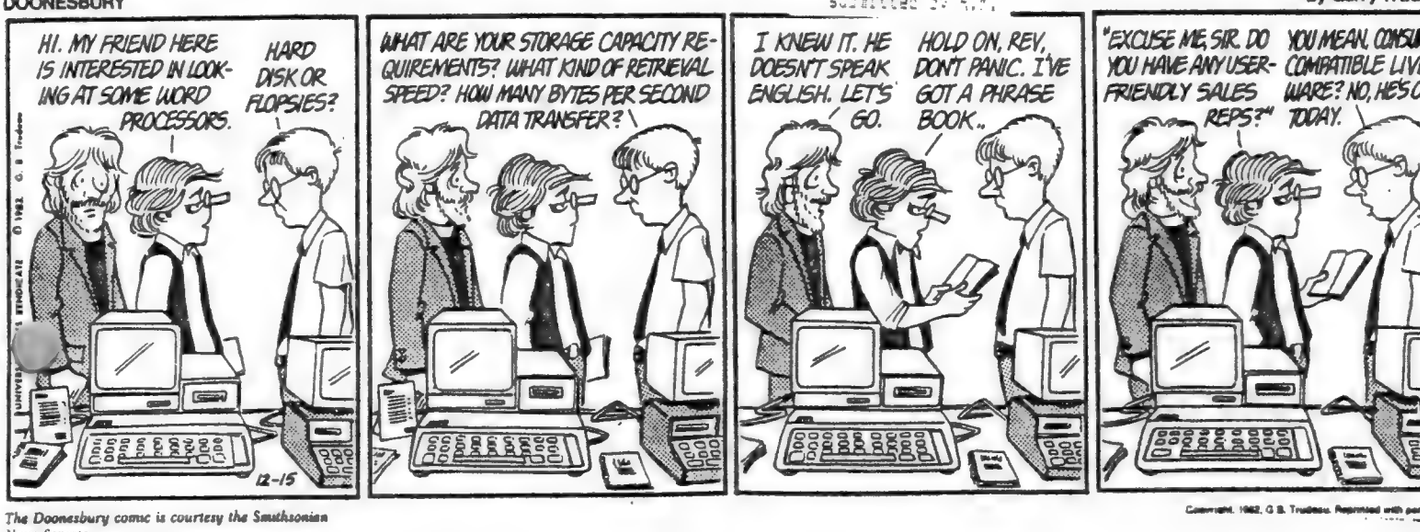
TIMEX has selected the Mannesman-Tally full size letter quality printer. Rather than go with a cheap 12 character per second daisy wheel printer, they opted for a top quality, 80 character per second dot matrix. It's a little more expensive, but a whole lot better. For example, this printer uses a rectangular dot format that meets edge to edge. Combined with a high density matrix, you get characters so close to typewriter quality, you'd need a magnifying glass to tell the difference. So, you can use it for important correspondence. Because it's dot matrix, you can also use it for graphics. Like I say, TIMEX wanted to cover all bases! The TIMEX version of this printer will sell for around $385.



TS2068: ADVANCED SYSTEM WITH A BIG FUTURE

Q: How many computer programmers does it take to change a lightbulb?
A: None - that's a hardware problem.

DOONESBURY — submitted by R.W. — by Garry Trudeau



The Doonesbury comic is courtesy the Smithsonian News Service.

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Product Review:

2050 Modems...

For TS1000, TS1500, and TS2068 Computers)

compiled by Gary Faryon

There is allways a lot of caution when a new product is launched. We have heard some deceptive rumors about the the new Westridge (T/S) 2050 Modem but these rumors have been over-shadowed by rave Magazine & User Group Reviews. This not to mention the fact that the 2050 giving us the the lowest return rate in Timex-Sinclair product history, has lead us to believe that this may be the most reliable (T/S) product yet.

The 2050 is a well finished commercial product manufactured by a company that specializes in modems. You don't have to be a programer or electronics expert to use it. The 2050 Modem works with all Timex computers (TS 1000, 1500,& the 2068) and comes with good operating software and an extensive, professionally printed instruction manual. Just plug it into your computer & phone jack, load the software, and your ready to communicate with any computer in the world!

Other features of the 2050 Modem include auto-dialing and answering. You don't need a telephone. You dial directly from the keyboard. If you leave the modem & computer turned on, it will answer the phone as well!

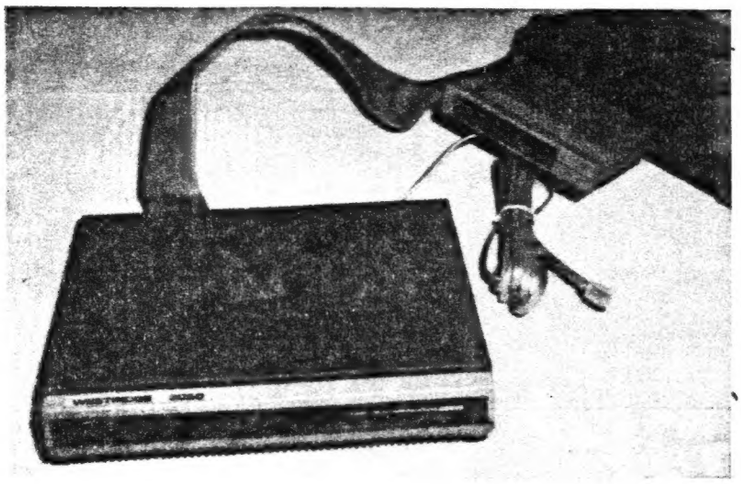
There are a lot of technical terms associated with modems. So as not to confuse things, the 2050 is preset to communicate with all of the special services like Compusere, The Source, to name only a few . But, right from the menu you can re-set these parameters using plain english terminology. Select half or full duplex , odd, even or no parity. You can set word size for 5, 6,7, or 8 bits. And, you can select 1 or 2 stop bits. The 2050 operates at 300 Baud, so it gets the lowest hourly rates on information services but is longer on long distance calls. You can print out what your watching on your 2040 or other printer.

Westridge allso has a new Modem Upgrade package called"Smart 2 Software". This new terminal software for the 2068 adds more power to your 2050 Modem. You get all of the features of the regular software plus the ability to down & upload data & programs from & to memory. For example , you don't have to type every-thing while your're "on line" with another computer. Get it all entered into memory beforehand & then download it at computer speed when you connect with another computer. You can also receive data into memory from other computers with this software. Smart 2 also contains a data base which allows you to maintain a file of phone numbers, acces codes, and passwords. Using this data base ,& the auto dial feature of the Modem you can instantly connect with information services, bulletin boards, ect. all at the touch of a button!

A product review comparing the 2050 Modem with the other compatible Modem on the market can be read in the Vancouver Users Group newsleter (Sept.) . Briefly they prefer the 2050 to the more expensive and cumbersome Byte Back MD-2 Modem. Thanks again to our friends in Vancouver I am going to close with a list of bulletin boards you can access with your Modem.

Satyricon	438- 2468	Vancouver	Low! charge
Crackshop 2	251-4043	Vancouver	Low! charge
T U G Systems	946-0955	Vancouver	Free
Colour Pacific	738-2773	Vancouver	Free
Frog Hollow	937-0906	Vancouver	Free
Kent Toys	435-2993	Vancouver	Free
POCO BBS	464 7693	Vancouver	Free
H-S MicroSystems	434-0001	Vancouver	Free
Comm-80	520-1470	Vancouver	Free
Twilight Zone	731-2724	Vancouver	Free
Data Link	388-8711	Victoria	Service Fee (B.C. Tel.)
Zebra Systems	212 296 2229	New York	Free !!!

See Jake for Victoria & other BBS (Bulletin Boards)



The Westridge 2050 Modem

($180.-$200. Cdn.)

We will have a 2050 Modem at the Oct. Meeting. If we can use Alisons phone we will have a full demo.

RATING GAME

SUBMITTED BY : GARY FARON

Below you will find a quick review of some 2068 software & peripherals. Each item is named with a very brief discription and a rating. The ratings are based on a five star system, one star is poor and five excellent.

CRAZYBUGS
Crazybugs is a "crazy" fun-fill-ed game in which you must move quickly through the maze, grabing eggs and unlocking the locks as you go-without being bitten by the bugs. If you win, you'll find the secret door and pass up to a more difficult level. Only the ''grand prize'' winner will have a chance to defeat the super bug. ©S.Hughes 1983 ***

BUSINESS #1
Two programs CHECKBOOK creates monthly transactions using the Peg-board system to categorize expences. ACONPAY creates a perpetual file from enter outstanding unpaids bills. ***

BUSINESS #2
Two programs: AOREC keeps a perpetual file of all invoices. Enter current date will show all overdue accounts & keep track of dunning letters sent. CUFILE is a monthly file of customers or sales. Prepares itemized invoice and has cross-reference capabilities to determine the monthly sales, included Taxes collected, materials cost and labor charges. Create database for AOREC to determine unpaid bills. ****

CYBERZONE
Special Feature:Voice activated laser weapons. Imagine yourself pitted against Cyber's ultra accurate laser fire.
The situation is tense as you avoid the swooping, spinning, fighters coming to get you.
Can you stay alive long enough to chip away at his left foot. His only vulnerable spot.
5 levels of play and exciting graphics.©SOFT-SYNC ***

TASWORD TWO
The professional word processer for the TS 2068 which some say is better that WordStar TM.
Featuring: Machine Code for fast operation, 64 characters per line to TV, Monitor, full-size or T/S 2040 Printer, Automatic word-wrap to keep text neat, Block move or copy, Insert mode anywhere, Margin setting, Center line great for headings, Reforming or entire paragraph you have edited, Scroll fast up and down, Find-Dig out specific word and replaces it.Comes with manual and Tutor program. *****

QUADRA CHART
Chart your course. Develop numerical charts and use that data to produce color graphs of pie, bar or line graphs. Single set of data can display as four differebt charts. ©Timex1983. ***

TIME GATE
A level two, 4D, Space Time,Sci-Fiction, Arcade, Adventure game. A hero is needed to fly back in time before the evil Swarm controlled the universe.
You must find the alien planet and destroy it. Great graphics. Best selling game in England. ©Quicksilva ****

GUARDIAN
Be the guardian of the seas, in this high-scoring, navel, adcade-type, 3-D Game. You must purse the remote-controlled droid warships and sink them with nuclear & conventional missles, before they get you or your time runs out. ©Timex1983. **

HUNGRY HORACE
Hilarious adventure game in which you help Horace tease the park rangers by stealing lunchs, eating flowers, and ringing alarms-but don't let the guards catch Horace or all is lost. Increasing levels of play provide a real challenge to the novice as wellos the expert. ©PISON 1983 ***

Peripherals

LIGHT PEN *(zerbra)*

Add a lightPen to your computer. Complete package includes light pen, Computer interface module, Multile choose demo program and Light pen game. ***

PRINTER(MANNESMANN-TALLY 80)

This was the printer Timex had choose to be the TS 2080 80 column printer. It's square dot matrix printing that moves this machine to one of the top letter quality printers. Also featured are Tractor or plain paper feed, Full graphics, a special builtin character set, plus many more. Without Centronics interface. ****

JOYSTICKS TS 2090

This joysticks were rated #1 by Acrade Magizine. They offer 9 position control and fire button ***

INTERFACE PRINTER

Serial interface which includes a 3 foot cable, LList and LPRINT software and Fast M/C Hi-Res. Screen copy routines. Use with the Epson, Star, Seiklsha, Gorilla Banana, and Radio Shack COLOR) printers.
TASMAN SERIAL I/O *****

ROMSWITCH

Install this device INSIDE your T/S 2068 and you can run practically all British ZX Spectrum programs plus your regular T/S 2068 Cassstes. Easy installation; nosoldering, or drilling. Runs up to25% more than the chameleon (EMU). There are thousands, many in the US, good spectrums programs to chose from. (Warranty Voided by opening computer.) ***

Here is the REGISTERED ADDRESS of the " VICTORIA SYNC ASSOCIATION "
(PHONE 604-386-4675) " 942 CLOVERDALE Ave.,
(+/or 604-381-8225) " VICTORIA, B.C., V8X 2T6

WELCOME

***** THE JUNTA *****

President	Dave Curry	743-9260
Vice President	Stu Montgomery	478-6350
Treasurer	Dee Shoolingin	388-5464pg#107
Secretary	Gerry Christie	381-8225
Director	Bob Clark	384-7410
Director	Julian Greenwood	598-7062
Director	Howard Millar	389-1106
Director	Brian Fowler	388-9353

LIBRARIANS (OFFICIAL AND OTHERWISE)
DAVE SKAALRUD --------ZX/TS/B1/1000
DAVE CURRY ----------DITTO
JAKE LIEBERHERR ---------- 2068
DEE SHOOLINGIN ----8"CP/M,FRUITWARE
DAVE HUSTON ---------- COMMODORE 64
KEN ARMSTRONG ---------- TI-99
CRAIG BIRD ------- Z80 MACHINE CODE
DALE BIRD ---------- COCO AND ATARI
BOB CLARK---------LOCKSMITH FRUIT]I

PROBLEMS? THEIR POSSIBLE SOLUTIONS:

2068	JAKE LIEBERHERR	389-0781
64K RAM	DAVE SKAALRUD	656-5879
ENGINEERING	DEE SHOOLINGIN	(drop by)
COMM-64	DAVE HUSTON	652-9806
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MEMBERSHIP INFORMATION -

MEMBERSHIP is $10- a YEAR-WHICH INCLUDES A SUBSCRIPTION TO THE NEWSLETTER-Regular MEETINGS are held on the SECOND THURSDAY of EACH MONTH.
TO JOIN SEND US (1) Your NAME (2) MAILING Address (street/P.O.Box--City--Province) (3) POSTAL CODE (4) PHONE # (5)CHEQUE/Money Order.
OPTIONAL INFO: (A) type of equipment used (B) special interest (C) experience level (D) other comments, gripes, suggestions, ads., etc.

ADVERTISING RATES:

-Full page: $40, Half: $20, Sixth: $10, Bus. card size: $5
-ZX line ads (32 spaces): $0.40 or 3/$1.00
One dollar minimum, except members, who also get $1 discount per classification.
Bona-fide job ads are free to members or non-members on a first come/ space available basis.(computer help-wanted ads may get preference)
All ads must be accompanied by payment (Checques payable to the Victoria Sync Assn.) and submitted camera-ready (ZX print-out or typed) two weeks or more before the second Thursday of each month.
When possible, ads will be CLASSIFIED as Work Wanted, Help Wanted, Trade/Swap, Wanted to Buy, For Sale, Play,etc.

CLASSIFIEDS

D AUDIO ELECTRONICS AND CONTRACTING

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outrageous/negotiable-->service,repairs,R&D,inventions,consulting
- Dee Shoolingin prop. pager 388-5464 #107 have stills will troubleshoot

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9-4

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